

# SCIENCE FAIR LAB REPORT

## Introduction

In my experiment I'm testing to see if reaction times are quicker with or without distractions. We have test subjects who will each sit and watch T.V for five minutes separately. When we say go, one at a time, they will get up and go to hit a table after doing a hand routine. We will repeat this without any T.V or distractions. In this experiment, the independent variable is whether there is a distraction or not. The dependent variable is how long the test subjects take to slap the table. The constants are same T.V show, the same timer, same distance, and same table.

## Background Information

Technology is one of the biggest distractions for kids ranging from even two years old to when they leave for college. Technology helps us stay connected but, it also causes problems like procrastinating which can lower grades. It could impact society in sports for reaction time if the person is distracted or not. Reaction time is when someone or something responds to something else. Distraction is a thing that prevents someone or something from giving full attention to something else. Reaction is a person's ability to respond physically and mentally to external stimuli. For example, if you are doing your homework and also watching t.v, you might get distracted and take a lot longer on your homework. Also, mind-wandering is linked to memory. Studies say that 50% of people's time is spent daydreaming even if we don't want it to.

## Hypothesis

If the test subject does not have a distraction, then, the person will react faster than a person with distractions because they will be more focused on the task we've given them. I think this because if I am distracted, it takes more time to respond.

## Materials

- 1) Stop watch
- 2) Test subjects
- 3) T.V
- 4) Table
- 5) Paper and pen

## Procedure

### (With distractions)

- 1) Tell test subject, when we say go, to run to the table and hit their legs, chest and then clap and hit the table.
- 2) Turn on T.V to appropriate but intriguing show
- 3) Make test subject watch the show for five minutes (keep track of the time using a timer)

- 4) Once the five minutes are up, keep the show playing but stop the timer
- 5) When you say go, restart the timer
- 6) Stop the timer once the subject slaps the table
- 7) Make sure every test subject watches the same part of the same show

## Procedure

### (Without distractions)

- 1) Repeat step number one from the procedure with distractions
- 2) Make the test subject sit without any distractions (make sure there aren't any toys or games near them) for three minutes
- 3) Make sure the test subject puts their hands on their heads so that they are even less distracted. Make sure that they stay silent.
- 4) Once the three minutes are up, stop the timer
- 5) When you say go, restart the timer
- 6) Stop the timer once the subject slaps the table

## Data

	Subject #1	Subject #2	Subject #3	Average
w/o distractions	12 seconds	3.73 seconds	4.04 seconds	6.59 seconds
with distractions	2.09 seconds	3.12 seconds	4.35 seconds	3.18 $\bar{6}$ seconds

## Conclusion

In our experiment, we made people sit and relax with or without distractions to see which one would react faster. Our hypothesis was incorrect. Those who were watching T.V, reacted faster than those who weren't. I think that this happened because the people who were not doing anything got relaxed and didn't have to pay attention to anything. The ones who watched T.V, on the other hand, were ready and paying attention. There are a few sources of error in our experiment. For example, some of the people could have forgotten what they were supposed to do. Also, maybe our timers were off or we didn't stop them at the right time. Lastly, the show might not have been interesting or distracting enough for a few people. An idea for a future experiment that builds off of this one is to see if people who do sports would react faster compared to those who aren't very athletic.

## Works cited

Gaidos, Susan. "Multitaskers do worse on tasks that require focus." *Science in Context*. Gale, 14 Nov. 2015. Web. 5 Jan. 2016.

<[http://ic.galegroup.com/ic/scic/MagazinesDetailsPage/MagazinesDetailsWindow?failOverType=&query=&prodId=SCIC&windowstate=normal&contentModules=&display-query=&mode=view&displayGroupName=Magazines&limiter=&u=dclib\\_main&currPage=&disableHighlighting=false&displayGroups=&sortBy=&source=&search\\_with](http://ic.galegroup.com/ic/scic/MagazinesDetailsPage/MagazinesDetailsWindow?failOverType=&query=&prodId=SCIC&windowstate=normal&contentModules=&display-query=&mode=view&displayGroupName=Magazines&limiter=&u=dclib_main&currPage=&disableHighlighting=false&displayGroups=&sortBy=&source=&search_with)

in\_results=&p=SCIC&action=e&catId=&activityType=&scanId=&documentId=GALE%7CA435355382>.

Whipps, Heather. "Study Reveals Why We Get Distracted so Easily." *live science*. live science, 2015. Web. 20 Jan. 2016. <<http://www.livescience.com/7238-study-reveals-distracted-easily.html>>.